Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Petro Hunt, LLC
Well Name/Number: Wolff & Sons, Inc. 18-51-26A-3-1
Location: SW NE Section 26 T18N R51E
County: Dawson **, MT; Field (or Wildcat)** W/C

Air Quality

(possible concerns)
Long drilling time: 25-35 days drilling time for a vertical Duperow Formation test.
Unusually deep drilling (high horsepower rig): No, large triple drilling rig for a vertical 9700', Duperow Formation Test.
Possible H2S gas production: Yes possible.
In/near Class I air quality area: No Class I air quality area.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: No special concerns, adequate surface casing, 2000' to be set and cemented back to surface with proper BOP stack should mitigate any concerns. Triple rig to drill a vertical 9700', Duperow Formation Test.

Water Quality

(possible concerns)
Salt/oil based mud: Use freshwater and freshwater mud system on surface hole. Invert oil based mud for mainhole from the base of surface casing to total depth of 9700'.
High water table: No high water table expected.
Surface drainage leads to live water: No, nearest drainage is an unnamed ephemeral tributary drainage to Deer Creek an ephemeral drainage, about 1/8 of a mile to the southwest from this location. There should not be any discharge of fluids off this location. There is a stock pond in this unnamed ephemeral drainage, about 2.5 miles to the southeast from this location.
Water well contamination: No, closest water wells nearby are all 1 mile and further from this well location. Surface hole will be drilled with freshwater and steel surface casing set and cemented from 2000' to protect surface waters and the Fox Hill aquifer.
Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: No, Class I stream drainages in the area.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)
__ Other: _____

Comments: 2000' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used on surface hole.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: No stream crossings anticipated.
High erosion potential: No, small cut, up to 5.1' and moderate fill, up to 13.7', required.
Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: Large, 450'X450' location size required.
Damage to improvements: Slight, surface use is cultivated fields.
Conflict with existing land use/values: Slight.

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X_ Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X_ Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
_X_ Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county road, #470 and section line trails. Will build about 2000' of new access road off the existing section line trails into this location. Pits will be lined. Oil based invert drilling fluid will be recycled. Completion fluids will be hauled to a permitted commercial Class II disposal. Solids will be allowed to dry in the lined reserve pit and then backfilled. Topsoil will be spread and seeded to vegetation per landowner specification. No special concerns

---

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest residences are about 5/8 of a mile to the west and about 1.25 miles to the southwest from this wellsite.
Possibility of H2S: Yes possible.
Size of rig/length of drilling time: Triple drilling rig 25 to 35 days drilling time.

Mitigation:
_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: No concerns. Proper BOP stack and adequate surface casing should be able to control any problems that occur. Distance to nearest residence and H2S contingency and/or evacuation plan sufficient to mitigate any concerns for H2S.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No
Threatened or endangered Species: Species identified as threatened or endangered by USFWS are the Pallid Sturgeon, Interior Lease Tern and the Whooping Crane. Species of concern is the Greater Sage Grouse and Sprague's Pipit. NH Tracker website lists one (1) species of concern. It is the Ferruginous Hawk

Mitigation:
__ Avoidance (topographic tolerance/exception)
X Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other: .

Comments: Minerals are DNRC "Trust Land". Private cultivated surface lands. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites: None identified

Mitigation
__ avoidance (topographic tolerance, location exception)
X other agency review (SHPO, DSL, federal agencies)
__ Other:

Comments: Minerals are DNRC "Trust Land". Private cultivated surface lands. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)
__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation
Comments: No concerns.

Remarks or Special Concerns for this site

Well is for a vertical 9700', Duperow Formation Test.

Summary: Evaluation of Impacts and Cumulative effects

No long term impact expected. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/ Steven Sasaki
(title:) Chief Field Inspector
Date: October 22, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Dawson County water wells
(subject discussed)
October 22, 2011
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Dawson County
(subject discussed)

October 22, 2011
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T18N R51E
(subject discussed)

October 22, 2011
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection: _____